

SUPPORT FOR THE AMENDMENTS

Claim 1 has been amended.

Claims 2, 4, 7-9, 11-14, 16, and 18-20 were previously canceled.

Claims 21-27 have been added.

Support for the amendment of Claim 1 and for the introduction of Claims 21-27 is provided by original Claims 1-6, and by page 8, line 9 to page 12, line 21 of the specification and Examples 6-8.

No new matter has been entered by the present amendment.

REMARKS

Claims 1, 3, 5, 6, 10, 15, 17, and 21-27 are pending in the present application.

The rejections of: (a) Claims 1, 3, 5, and 10 under 35 U.S.C. §103(a) over Shiiba et al in view of Goto et al and (b) Claims 6, 15, and 17 under 35 U.S.C. §103(a) over Shiiba et al in view of Goto et al and Koike et al are respectfully traversed.

Shiiba et al corresponds to JP 2002-176952, which is discussed on page 1 of the specification:

On one hand, diglycerides have been revealed to have an action of preventing obesity, an action of inhibiting the increase of body weight (JP-A 4-300826, JP-A 10-1761813 and also found to have an effect of reducing blood cholesterol levels when used in combination with phyto-sterols (WO-A 99/48378). In addition, acidic oil-in-water emulsified compositions rendered excellent in outward appearance and physical properties by using diglycerides in combination with phospholipase-treated yolk, a crystallization inhibitor, etc. have been disclosed (JP-A a001-138, JP-A 2002-17695/, JP-A 2002-1769533).

The method disclosed by Shiiba et al suffers from the deficiencies stated in the paragraph bridging pages 1-2 of the specification:

It is known that the taste of acidic oil--in-water emulsified compositions using yolk becomes a further full-bodied mild taste through the so-called "aging", that is, storage under specific conditions after production (knowledge of Mayonnaise/Dressing, Chuhei Tmai, Sachi Shobo, 1993). By this flavor after aging, the qualitative value of the acidic oil-in-water emulsified composition is significantly varied. The acidic oil-in-water emulsified composition using enzyme-treated yolk is excellent in emulsion stability, heat resistance, etc., but tends to be deficient in full-bodied taste after aging, particularly when fats and oils with a high diglyceride content are used.

As stated in the paragraph bridging pages 2-3 of the specification, the present invention solves the problems associated with Shiiba et al by adding an antioxidant in a specific amount. Indeed, neither Shiiba et al nor Goto et al disclose the weight ratio of antioxidant relative to the net weight of yolk in the enzyme-treated yolk.

The Examiner contends that Goto et al provides motivation for adding the antioxidant. In this regard, the rejection is no different from the previous rejections based on Kawai et al, which is apparently why the Examiner feels compelled to provide a response to the arguments filed on March 22, 2010 on pages 6-7 of the Office Action despite withdrawing this previous rejection.

As was the case previously with Kawai et al, the clearest, if not most significant, difference between the claimed invention and the cited art is that neither Shiiba et al nor Goto et al disclose the weight ratio of antioxidant relative to the net weight of yolk in the enzyme-treated yolk. The Examiner yet again contends that although these reference are individually silent with respect to this ratio, this argument is of no merit as it merely addresses the references individually. Applicants ask, if the references are individually silent with respect to a limitation, how could it be possible that the combination of references suggests that which they do not appreciate?

As was the case previously, the Examiner contends that if the artisan were to add the amount of antioxidant disclosed by Goto et al into the oil-in-water composition disclosed by Shiiba et al, then the combination of references would provide motivation to use an overlapping range of the weight ratio of antioxidant relative to the net weight of yolk in the enzyme-treated yolk (see Examiner's calculation at pages 4-5 of the Office Action). However, this is not a relevant comparison and is an unfair treatment of the cited art.

The Examiner's contentions can be summarized as: if you add antioxidant in the broad amount disclosed by Goto et al into the broad amount of enzyme-treated yolk the ratio of the two would necessarily be met. For the same reasons given for the previous rejections, Applicants that the claimed invention would not be obvious in view of the combined disclosures of Shiiba et al and Goto et al and that the resulting benefits would not have been expected.

Specifically, it is not proper to selectively pick-and-choose random examples to insert an additional ingredient (i.e., antioxidant) in a specific disconnected concentration where neither reference provides any basis to disclose or suggest the amount of the antioxidant relative to the net weight of yolk in the enzyme-treated yolk. It is disclosed in Goto et al, column 4, lines 65-67, that an antioxidant is preferably added to the oil and fat composition of the invention disclosed therein in an amount of 50 to 2,000 ppm. However, this disclosure has no relation to a composition containing an enzyme-treated yolk treated with one or more enzymes selected from the group consisting of esterase, lipase and phospholipase as presently claimed.

Applicants again refer to the background of the invention bridging pages 1-2 of the specification, from which the present invention seeks to solve problems in Shiiba et al, for example, which may appear to have excellent outward appearance and physical properties, but has inconsistent taste profiles upon aging. This problem is not disclosed, suggested, or even apparent from the disclosure of Shiiba et al. Indeed, in paragraph [0002], Shiiba et al stated that their acidic oil-in-water type emulsion composition such as mayonnaise or dressing, is “excellent in emulsion stability even under low-temperature conditions such as in side refrigerators, good in appearance and flavor and useful as diet or food for improving lipid metabolism.” Certainly, Shiiba et al provides no recognition of the deficiencies in the inconsistent taste profiles upon aging which the present invention seeks to solve.

Further, Goto et al does not disclose an embodiment having enzyme-treated yolk. As such, this reference does not recognize or even relate to the problems in taste stability in an emulsion compositions containing an enzyme-treated yolk.

Again, it must be noted that the Supreme Court has held that the discovery of a problem or a cause of a problem can lend patentability to an invention. The discovery of a problem is often the key to making a patentable invention. Thus, the patentability of an

invention under 35 U.S.C. §103 must be evaluated against the background of the highly developed and specific art to which it relates, and this background includes an understanding of those unsolved problems persisting in the art solved by the invention. *See, Eibel Process Co. v. Minnesota & Ontario Paper Co.*, 261 U.S. 45, 43 S.Ct. 322, 67 L.Ed. 523 (1923).

The Examiner continues to disregard this argument. This time for a new, unique but equally incorrect reason. Specifically, the Examiner alleges, in part, that *Eibel Process Co.* is distinct from the issue at hand because “[u]nlike the Eibel case, the prior art recognizes the problem, i.e., oxidation, and presents the solution, i.e., adding an antioxidant.” This allegation by the Examiner is clearly erroneous and the Examiner’s alleged point of distinction is unsupported. Indeed, at no point does the art, specifically Shiiba et al, disclose or suggest the problem of oxidation and the addition of an antioxidant. The Examiner fails to show where such an appreciated is found.

Further, neither Shiiba et al nor Goto et al disclose that a problem exists in the taste stability in an emulsion compositions containing an enzyme-treated yolk. Indeed, Goto et al does not disclose such an emulsion composition. Moreover, as stated above, Shiiba et al states that their emulsion composition “has excellent shelf stability” and is “also good in appearance and flavor” (see Abstract and paragraph [0002]). At no point does Shiiba et al or Goto et al state that oxidation is a problem in emulsion compositions containing an enzyme-treated yolk or that the addition of an antioxidant in the claimed ratio is the solution. It is telling that the Examiner does not even attempt to provide any citation to where such a disclosure is allegedly found in these references.

The legal concept of *prima facie* obviousness is a procedural tool of examination which applies broadly to all arts. It allocates who has the burden of going forward with production of evidence in each step of the examination process. *See In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *In re Linter*, 458 F.2d 1013, 173 USPQ 560 (CCPA

1972); *In re Saunders*, 444 F.2d 599, 170 USPQ 213 (CCPA 1971); *In re Tiffin*, 443 F.2d 394, 170 USPQ 88 (CCPA 1971), *amended*, 448 F.2d 791, 171 USPQ 294 (CCPA 1971); *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968).

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness. In view of the foregoing, Applicants submit that the Examiner has failed to establish a proper *prima facie* case of obviousness in view of the disclosures of Shiiba et al and Goto et al, with or without Koike et al.

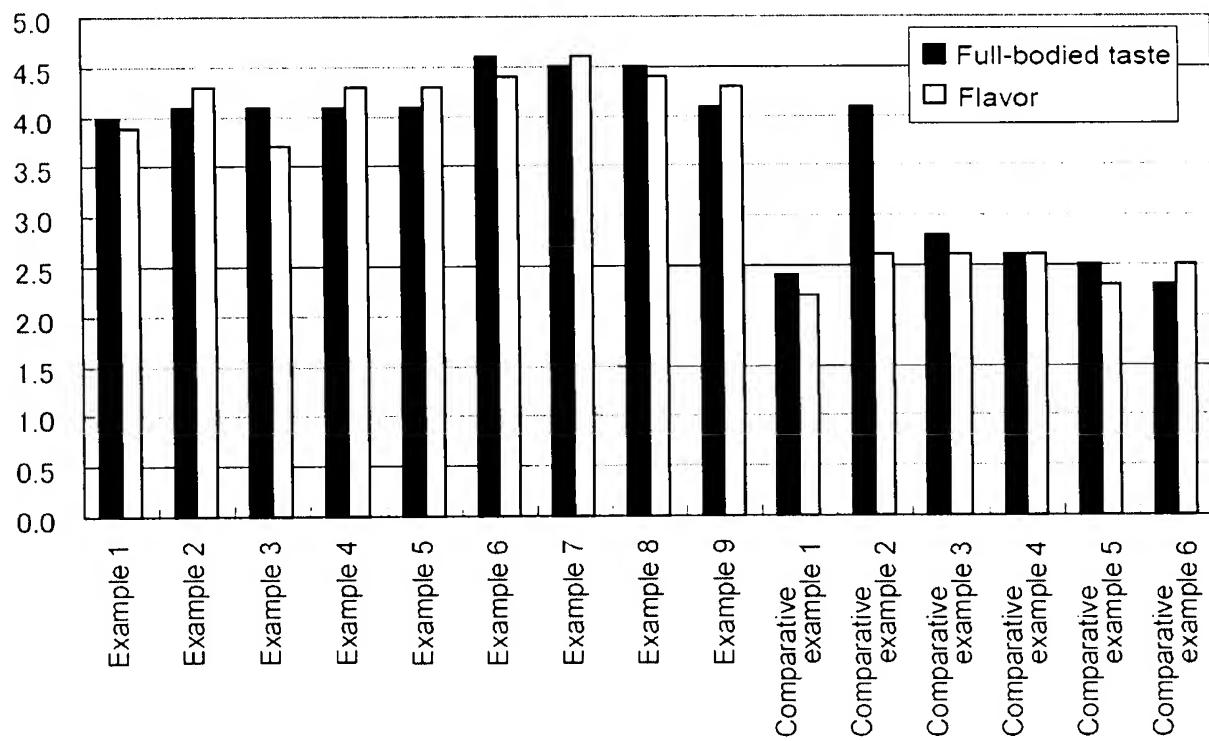
Even if the Examiner had properly established a *prima facie* case of obviousness, Applicants submit that the evidence of record sufficiently rebuts the same. “Evidence of unobvious or unexpected advantageous properties, such as superiority in a property the claimed compound shares with the prior art, can rebut *prima facie* obviousness. “Evidence that a compound is unexpectedly superior in one of a spectrum of common properties . . . can be enough to rebut a *prima facie* case of obviousness.” No set number of examples of superiority is required. *In re Chupp*, 816 F.2d 643, 646, 2 USPQ2d 1437, 1439 (Fed. Cir. 1987)” Thus, the experimental data discussed above from the specification clearly illustrates that substantial benefits flowing from the claimed method, which are enough to rebut a *prima facie* case of obviousness.

Nonetheless, solely to expedite examination, Applicants have amended the claims to define the emulsifier as being selected from the group consisting of “sorbitan fatty acid ester having an HLB value of 1 to 2.5, polyglycerin fatty acid ester having an HLB value of 1 to 3.5 and sucrose fatty acid ester having an HLB value of 1 to 2”.

With respect to the amended claims, Applicants submit that the foregoing arguments apply and further submit that the claimed invention is an oil-in-water emulsified composition. It is known to the skilled artisan to use an emulsifier having a high HLB value for an oil-in-

water emulsified composition. It is also known to the skilled artisan to use an emulsifier having a low HLB value for a water-in-oil emulsion.

Thus, the invention as presently claimed cuts against the common knowledge proving a emulsifier having a low HLB value as presently claimed in an oil-in-water emulsified composition to obtain an unexpected improvement in full-bodied taste and a mild flavor after aging. This unexpected effect is clearly illustrated by Examples 6-8, which use the three species of emulsifiers defined in Claim 6, in comparison to Example 2 which lacks an emulsifier, see Figure 1:



On pages 7-8 of the Office Action, the Examiner takes issue with the reliance upon the data in the specification. First, the Examiner alleges that the comparison is not commensurate in scope with the claimed invention. Applicants submit that this issue is now moot in view of the amendment herein to define the emulsifier as being selected from the group consisting of “sorbitan fatty acid ester having an HLB value of 1 to 2.5, polyglycerin

fatty acid ester having an HLB value of 1 to 3.5 and sucrose fatty acid ester having an HLB value of 1 to 2".

Second, the Examiner characterizes "flavor" and "full-bodied taste" as subjective interpretations that are not necessarily repeatable and/or cannot be objectively quantified or measured. Applicants disagree with this allegation by the Examiner. At page 17, line 15 to page 18, line 9, Applicants provide a clear description of the organoleptic testing and evaluation criteria. From this description, those skilled in the art are clearly capable of repeating the comparative study. Moreover, Applicants submit in the area of food products, organoleptic testing is a common, accepted technique. More importantly, the Examiner's erroneous allegation has already been addressed in Bailey's Industrial Oil and Fat Products, Sixth Edition (2005, John Wiley & Sons, Inc.), Malcolmson, L.J., "Chapter 10: Flavor and Sensory Aspects" p 413-429, as being a common problem:

Sensory methods are often criticized as being subjective techniques. Part of the problem lies with the failure to acknowledge *that two distinct types of sensory tests exist. Product-orientated tests involve the use of selected and trained panelists under controlled testing conditions to evaluate the attributes of a product. These products are objective because they meet the criteria of objectivity, namely freedom from personal bias and repeatability.* Consumer-oriented tests involve the use of consumer panelists to determine degree of liking for a product or product acceptability. These tests, by their very nature, are subjective because it is the subjective information (personal likes and dislikes) that is of interest. Thus, if sensory tests are done under controlled testing conditions, using trained panelists and appropriate sensory methodologies, the procedures are objective. (see page 413-414, emphasis added)

In view of the foregoing, Applicants submit that the evidence of record is recognized as being objective and, thus, relevant to show non-obviousness.

When an applicant timely submits evidence traversing a rejection, the examiner must reconsider the patentability of the claimed invention. The ultimate determination of patentability must be based on consideration of the entire record, by a preponderance of

evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence. *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The submission of objective evidence of patentability does not mandate a conclusion of patentability in and of itself. *In re Chupp*, 816 F.2d 643, 2 USPQ2d 1437 (Fed. Cir. 1987). Facts established by rebuttal evidence must be evaluated along with the facts on which the conclusion of a *prima facie* case was reached, not against the conclusion itself. *In re Eli Lilly*, 902 F.2d 943, 14 USPQ2d 1741 (Fed. Cir. 1990). In other words, each piece of rebuttal evidence should not be evaluated for its ability to knockdown the *prima facie* case. All of the competent rebuttal evidence taken as a whole should be weighed against the evidence supporting the *prima facie* case. *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

Applicants submit that the Examiner has not provided any such evaluation of record and has not properly considered the secondary evidence of non-obviousness presented in the specification. Applicants further submit that when properly balanced, the scales clearly tip in favor of non-obviousness.

Koike et al is only cited as disclosing the content of trans-unsaturated fatty acids in the fatty acids constituting the diglycerides. This reference does not compensate for the deficiencies in Shiiba et al and Goto et al discussed above. As such, the claimed invention would not be obvious in view of the combined disclosures of Shiiba et al, Kawai et al and Goto et al.

In view of the foregoing, Applicants request withdrawal of these grounds of rejection.

Finally, the objection to Claim 1 is obviated by amendment. Applicants have amended Claim 1 to remove the comma that the Examiner deems unnecessary. Withdrawal of this ground of objection is requested.

Applicants submit that the present application is in condition for allowance. Early notification to this effect is respectfully requested.

Respectfully submitted,

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